

U.S. Patent Application No. 10/565,460
Attorney Docket No. 13741/12
Reply to Office Action of December 30, 2008

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF THE CLAIMS:

1-12. (Canceled).

13. (Currently Amended) A linear motor for a modular transportation device, comprising:

at least one primary part having a plurality of field-generating coils that are mounted side-by-side along a predetermined route;

at least one secondary part, wherein the plurality of field-generating coils of the at least one primary part provides a propulsion field for propulsion of the at least one secondary part, and wherein the at least one secondary part is configured to support at least one consumer positioned on the at least one secondary part; and

an energy transmitting interface interposed between the at least one primary part and the at least one secondary part;

wherein an energy supply field having a higher frequency than a frequency of the propulsion field is superposed on the propulsion field, and

wherein the energy supply field is inductively coupled via the energy transmitting interface and supplies energy to at least one AC/DC converter provided on the at least one secondary part,

wherein the at least one AC/DC converter is connected to the energy transmitting interface and supplies the at least one consumer positioned on the at least one secondary part, and

wherein the at least one consumer is connected to the AC/DC converter via a DC/DC converter.

14. (Currently Amended) The linear motor as recited in Claim 13, wherein the at least one consumer is configured to execute a procedure required for an application process, wherein the application process is not drive-relevant, and wherein the at least one consumer is an apparatus relevant to the application process.

15. (Previously Presented) The linear motor as recited in Claim 13, further comprising:

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a set-point interface;
a coil drive circuit that is stationary with respect to the at least one primary part; and
a support unit for providing rigid support of the at least one secondary part, wherein the support unit guides the at least one secondary part along the predetermined route;
wherein the at least one secondary part includes at least a permanent magnet and a signal-processing device having one of a propulsion controller and a motion controller, and wherein the one of the propulsion controller and the motion controller generates at least one set-point value relevant to coil control, and wherein the at least one set-point value is supplied via the set-point interface from the at least one secondary part to the coil drive circuit as the quantity used for commutation, and wherein the linear motor is configured to be driven in one of a mono-phase and multi-phase manner.

16-17. (Canceled).

18. (Previously Presented) The linear motor as recited in Claim 13, wherein at least one AC/AC converter is provided on the at least one secondary part, and wherein the at least one AC/AC converter is connected to the energy transmitting interface and supplies the at least one consumer.

19. (Previously Presented) The linear motor as recited in Claim 18, wherein the at least one consumer is connected to the AC/AC converter via an AC/DC converter.

20. (Previously Presented) The linear motor as recited in Claim 13, wherein the plurality of field-generating coils generate the energy supply field, and wherein the energy supply field lies substantially opposite to the at least one secondary part.

21. (Previously Presented) The linear motor as recited in Claim 13, wherein the plurality of field-generating coils generate the energy supply field, and wherein the energy supply field lies substantially opposite to the energy transmitting interface.

22. (Previously Presented) The linear motor as recited in Claim 21, wherein the plurality of field-generating coils supply energy in response to an initialization of the at least one secondary part.

23. (Previously Presented) The linear motor as recited in Claim 22, further comprising:
at least one of buffered accumulators, batteries, and solar cells provided to ensure supply of required energy via the energy transmitting interface during normal operation.

24. (Previously Presented) An industrial machine system configured to implement an automation path for an industrial process that includes a linear motion, comprising:
a linear motor arrangement which executes the linear motion, wherein the linear motor is driven in one of a mono-phase and multi-phase manner with motion control, wherein the linear motor arrangement includes:
at least one primary part having a plurality of field-generating coils in winding arrangement along a predetermined route;
at least one secondary part, wherein the plurality of field-generating coils of the at least one primary part provides a propulsion field for propulsion of the at least one secondary part, and wherein the at least one secondary part is configured to support at least one consumer positioned on the at least one secondary part; and
an energy transmitting interface interposed between the at least one primary part and the at least one secondary part;
wherein an energy supply field having a higher frequency than a frequency of the propulsion field is superposed on the propulsion field, and wherein the energy supply field is inductively decoupled via the energy transmitting interface and supplies energy to the at least one consumer positioned on the at least one secondary part.